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(56) Documents Cited

GB 2309160 A GB 1407484 A EP 0439420 A
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(58) Field of Search

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INT CL⁶ A45C, A45F
Online : WPI

(54) Abstract Title

Combined storage device and mat or mattress

(57) A portable combined mat or mattress and storage device (1) comprises:

a mat or mattress portion (2) having two ends and two sides,
a storage portion (3), attached to one end or to one side of the mat portion, which comprises a plurality of transversely arranged pockets (18),
a fastening means 7(8), and
a carrying means (4)

adapted such that

the storage portion (2) and the mat portion (3) can be rolled up coaxially end-to-end, so that the storage portion is inside the resulting roll, and the roll can then be fastened with the fastening means 7(8), and carried by the carrying means (4).

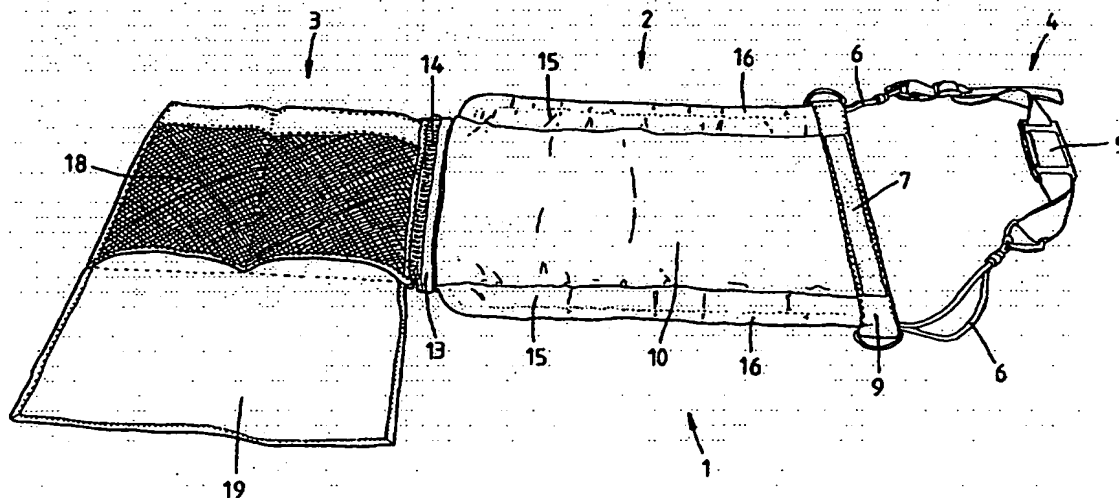


Fig. 1

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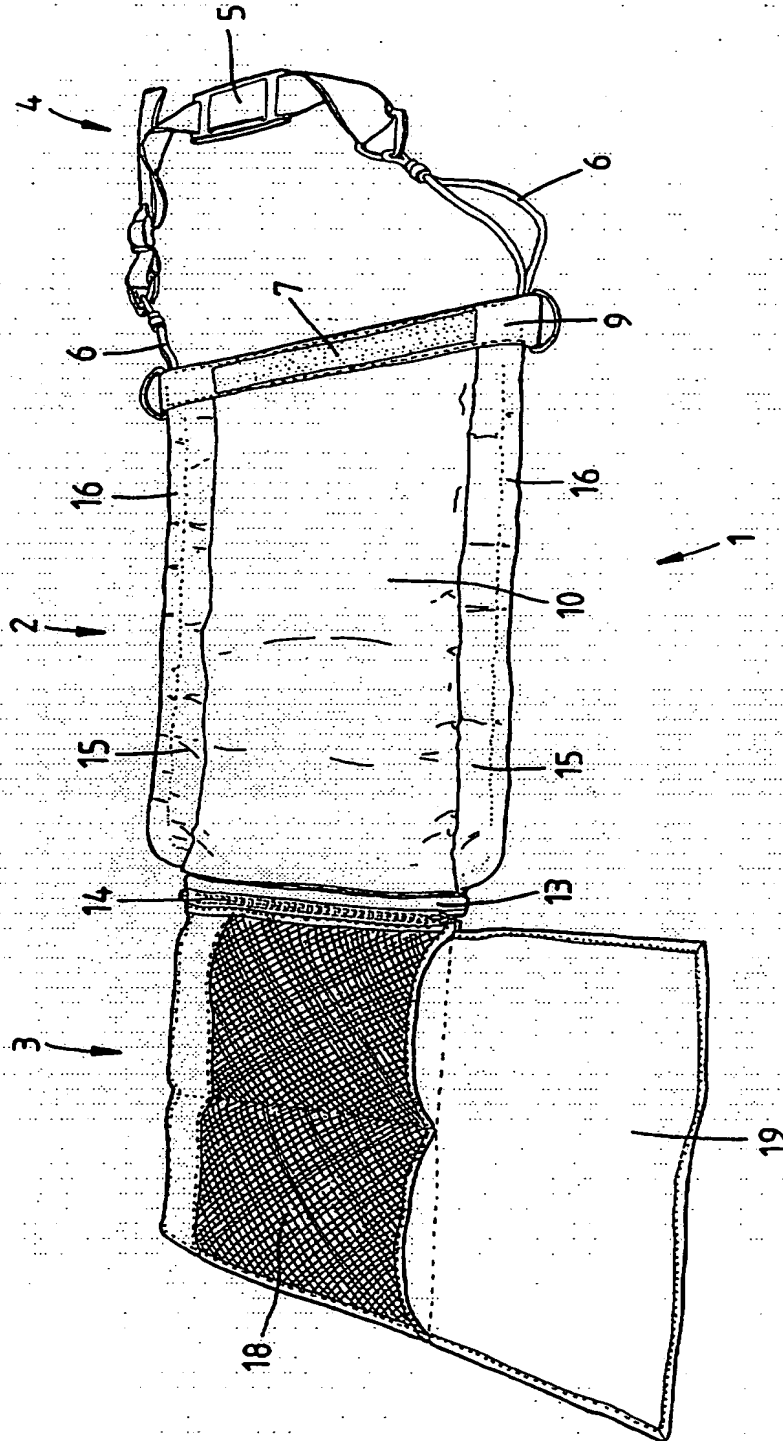


Fig. 1

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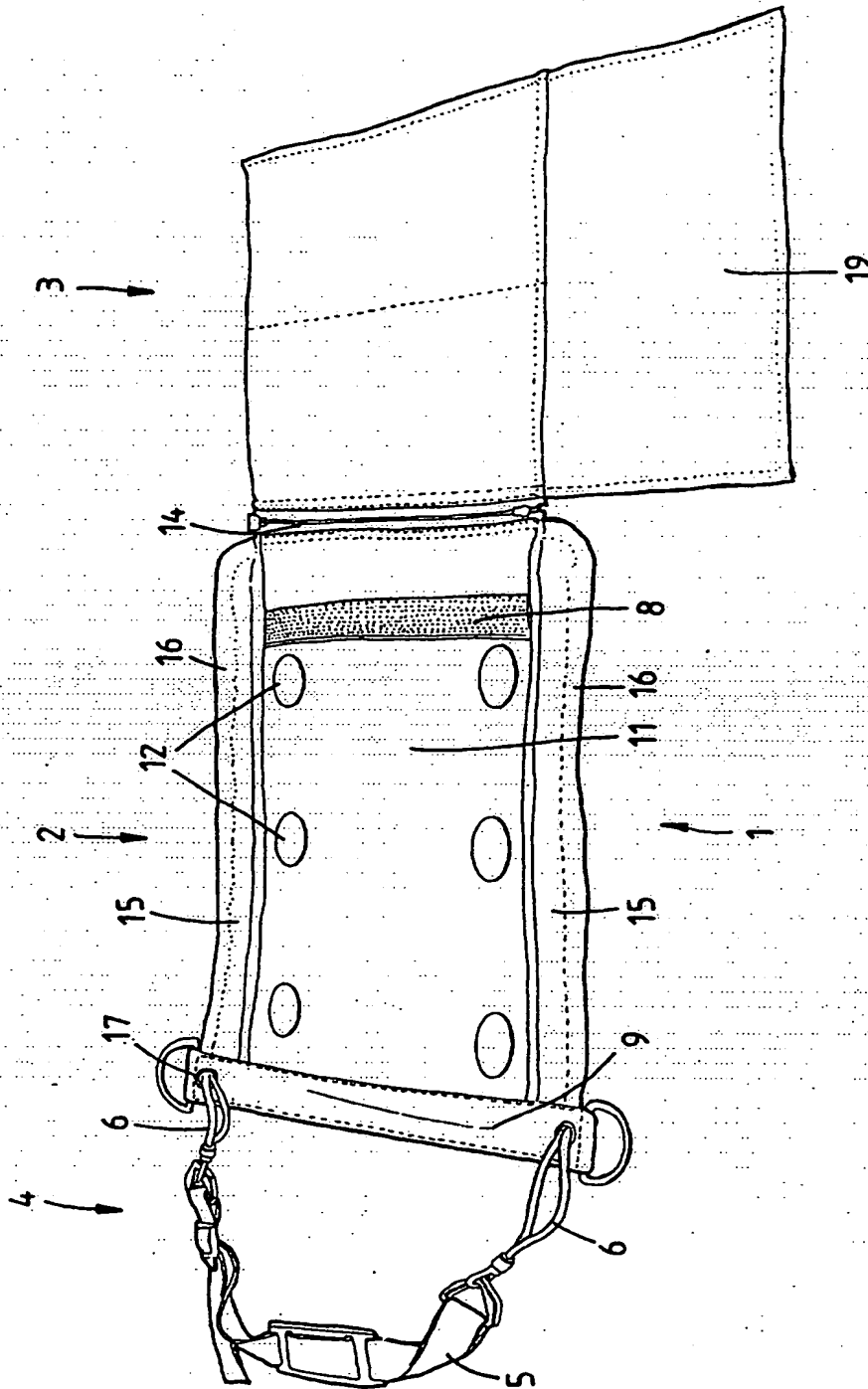


Fig. 2

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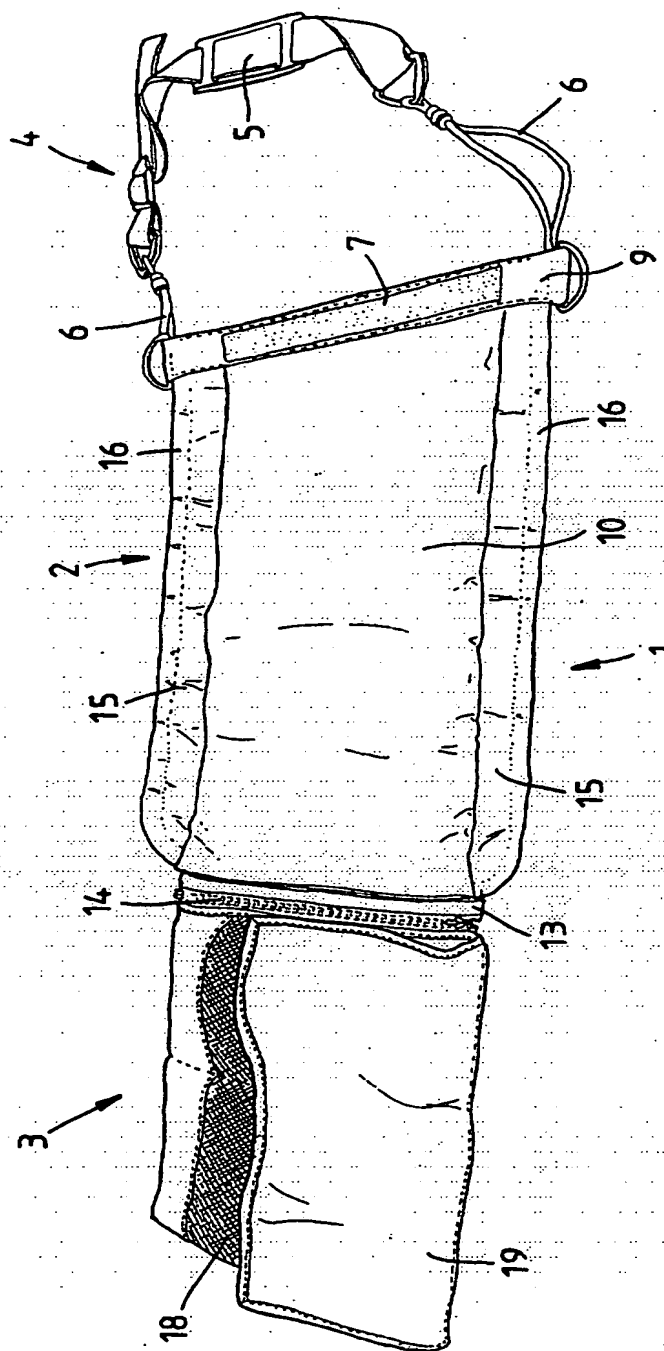


Fig. 3

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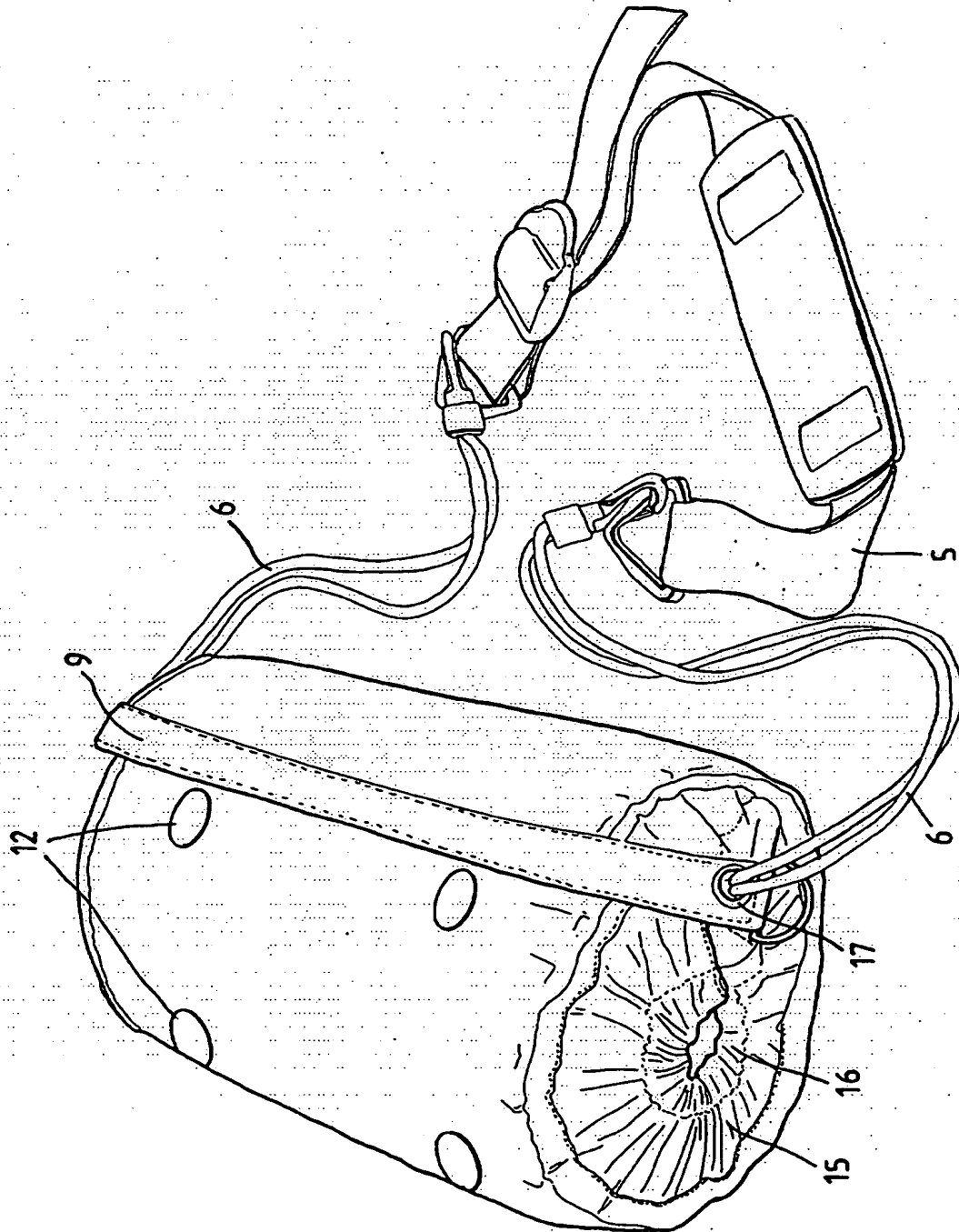


Fig. 4

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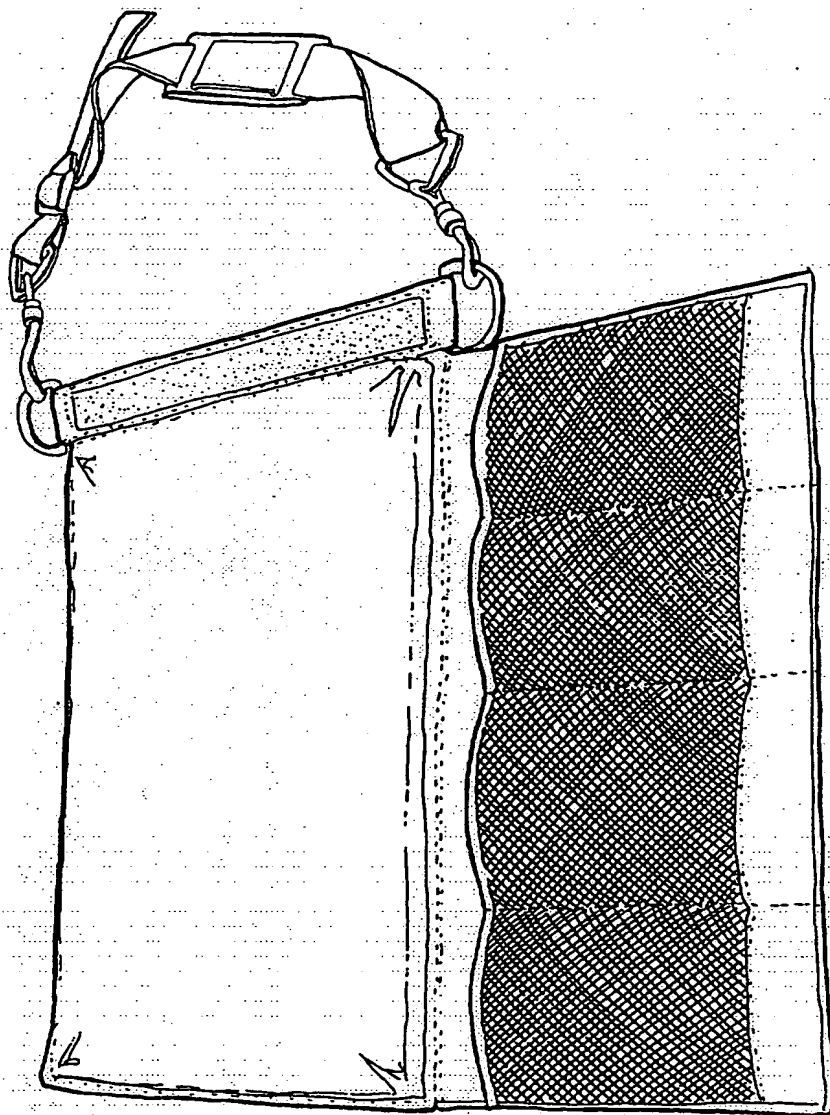


Fig. 5

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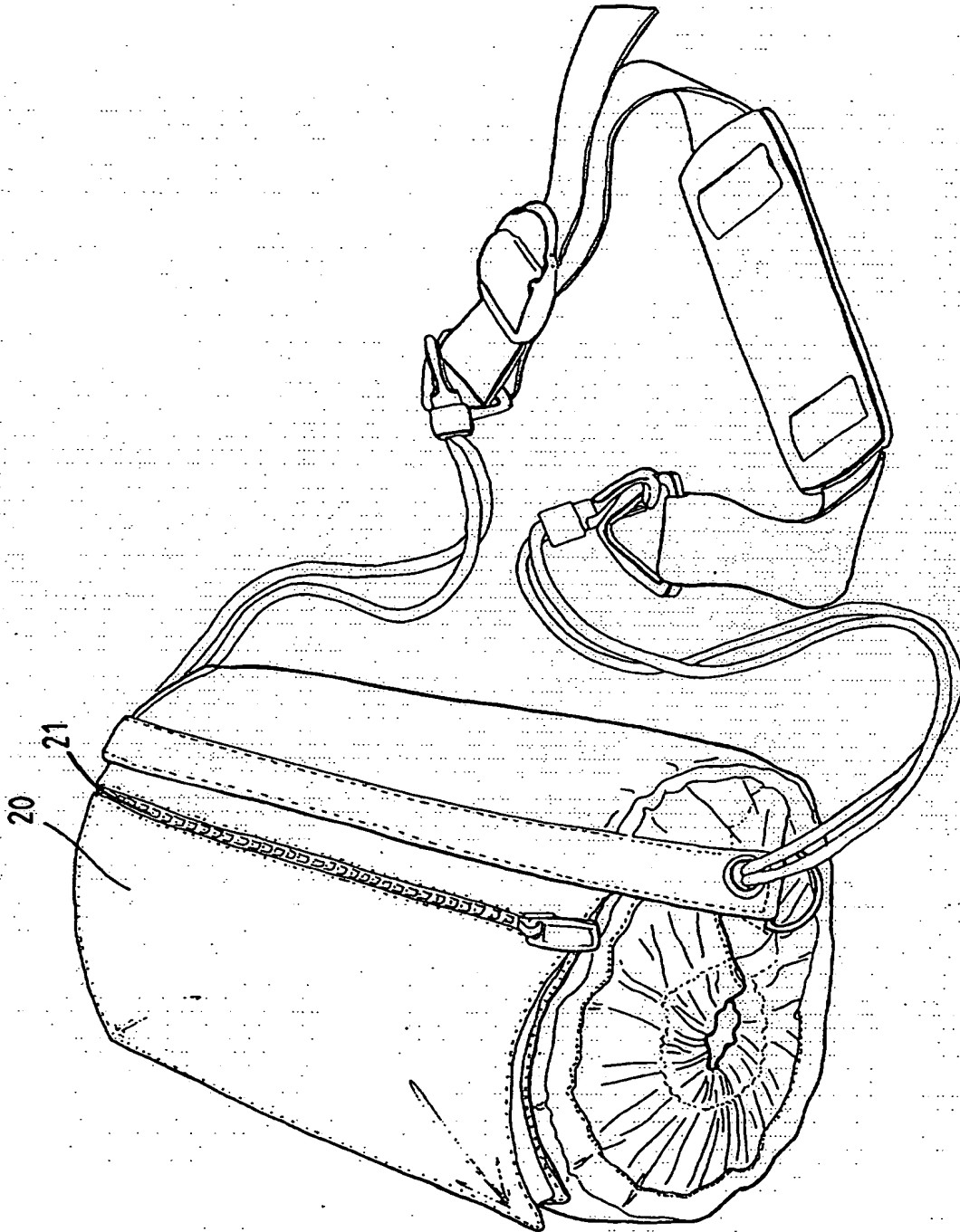


Fig. 6

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Portable combined mat and storage device

5 This invention relates to a portable device which is a combined mat and storage device. In particular, this invention relates to such a device for use for resting babies on, particularly when changing nappies away from home, as well as for transporting the necessary supplies.

10 Mats for resting babies on when changing nappies away from home are well known. However, conventionally, the mat is a separate item, and the supplies necessary are carried in a bag. This is inconvenient, especially when there is only one adult who must attend to the baby and un-pack and re-pack the bag. There is therefore a need for a convenient and portable solution to this problem.

15 According to the invention, there is provided a portable combined mat and storage device comprising:

- a mat portion having two ends and two sides,
 - a storage portion, attached to one end or to one side of the mat portion, which
 - 20 comprises a plurality of transversely arranged pockets,
 - a fastening means, and
 - a carrying means
- adapted such that
- the storage portion and the mat portion can be rolled up coaxially end-to-end, so that
- 25 the storage portion is inside the resulting roll, and the roll can then be fastened with the fastening means, and carried by the carrying means.

The mat portion may be made from any suitable material that provides the requisite degree of padding, and is substantially waterproof. Preferably, the mat portion is made

30 from fire-resistant polyurethane foam, covered in washable PVC-coated cotton fabric

on the face that is inside when the device is rolled up (*i.e.* the face that is upward during use), and in tough polyamide or polyester fabric, *e.g.* rip stop nylon, on the face that is outside when the device is rolled up (*i.e.* the face that is on the underside during use).

In a preferred embodiment, the mat portion further comprises, on the face that is on the underside during use, a slip-resisting means. This may be any suitable gripping means, for example adhered or stitched-on rubber mouldings, or printed non-slip elastomer composition, *e.g.* spandex. The mat portion is preferably generally elongate, having shorter ends and longer sides. The generally elongate shape may be rectangular.

Alternatively, particularly when the storage portion is attached to one end of the mat portion, the elongate shape may be D-shaped at the end distal to the attachment end.

The storage portion may be made from a variety of materials. Preferably the storage portion is made from tough polyamide or polyester fabric, *e.g.* rip stop nylon, with the faces of the pockets being nylon mesh. (The mesh allows the user easily to identify the contents of the pockets). The storage portion may additionally comprise a flap or flaps to cover and close off the pockets. The flap or flaps are preferably made from the same material as the main part of the storage portion.

The device according to the invention can be rolled up coaxially end-to-end, that is, about a transverse axis of the mat portion. There are two ways in which the device may be rolled up, depending upon whether the storage portion is attached to a side or to an end of the mat portion. In a preferred embodiment, the storage portion is attached to an end of the mat portion, and the device is rolled up as a single roll, about a transverse axis of the mat portion, starting with the storage portion and ending with the mat portion. In this manner, the storage portion is entirely in the centre of the roll, and is entirely surrounded by the mat portion on the outside of the roll. Alternatively, when the storage portion is attached to a side of the mat portion, the storage portion must first be folded on top of the mat portion, and then the device rolled up together about a transverse axis of the mat portion. This produces a 'swiss-roll' style of roll. The storage portion is still inside the roll, but it is only surrounded on the outside by a part

of the mat portion. (It will be appreciated that when the mat portion is square, the terms 'end' and 'side' are interchangeable).

The mat portion and the storage portion may be permanently attached, or alternatively
5 the storage portion may be detachable. When the storage portion is detachable, suitable attachment means are a sliding clasp fastener (such as a zip), buttons, press studs, or a surface fastener (such as Velcro [RTM]). A sliding clasp fastener is preferred.

The fastening means may be any suitable fastening means, for example strips of
10 complementary surface fastener (such as Velcro [RTM]), or a tie fastener (viz. a strip or strips of fabric that can be wrapped round the roll and then tied). According to a preferred embodiment, the fastening means comprises two strips of complementary surface fastener material, one attached to a flap on the end of the mat portion distal to the storage portion, on the face which is towards the inside of the device when rolled
15 up, and the other attached to the mat portion on the face which is towards the outside of the device when rolled up.

The carrying means may comprise any suitable handle attached to the device. In one particularly preferred embodiment, the carrying means comprises a cord which forms
20 part of a drawstring closure to cover the ends of the roll once the device is rolled up. In this embodiment, the mat portion has a flap on each side, and the cord passes along the outer edge of each flap. When the device is rolled up, the cord can be pulled tight (in fact this will usually occur automatically under the weight of the device), and the flaps then form a closure covering the ends of the roll. This prevents any articles falling out
25 of the device.

Preferably, the flaps are of a width approximately equal to the radius of the device when rolled up and normally loaded. Also, the flaps are preferably of a length approximately equal to the circumference of the device when rolled up and normally
30 loaded. Clearly, the exact radius and dimension of the rolled-up device will vary

according to how full the storage portion is packed, so by 'normally loaded' is meant at a normal, typical loading.

In another preferred embodiment of the invention, the device further comprises a further pocket, attached to the mat portion, that is accessible when the device is rolled up. Thus it will be attached to the end of the mat portion that is outermost when the device is rolled up. This is useful for storing items that may be needed at times other than when the mat is in use. This pocket is preferably made from the same material as the bulk of the storage portion, and is also preferably closeable with a sliding clasp fastener (such as a zip).

Devices according to the invention are not limited to use for babies. Larger versions of the device are useful in any situations where it is desired to take a mat and some other belongings. For example, the device can be used as a beachmat (with the storage portion for packing towel, sun-cream, and so on); as an exercise or gym mat (with the storage portion for keeping sports clothes); and as a sleeping mat (whether for adults or for babies).

When the mat is of a size suitable for use for changing a baby, the flaps preferably extend substantially along the whole length of the mat. If the cord is kept somewhat tensioned when the device is unrolled, the flaps are thereby maintained elevated from the plane of the mat portion, thereby creating sidewalls. These serve to help prevent the baby from rolling off the mat.

The device will now be described with reference to some particularly preferred embodiments, it being understood that this is intended only to illustrate the invention, and in no way to limit its scope.

In the drawings:

Figure 1 shows a device according to the invention, fully extended.
Figure 2 shows the reverse of the device fully extended.

Figure 3 is as Figure 1, but with the flap covering the pockets.

Figure 4 shows the device fully rolled up.

Figure 5 shows an alternative embodiment of the invention wherein the storage portion is attached to the side of the mat portion.

- 5 Figure 6 shows a further embodiment of the invention, with a pocket which is accessible when the device is rolled up.

According to the first embodiment, and with reference to Figures 1 and 2, the device (1) consists of a mat portion (2), a storage portion (3), a carrying means (4) consisting of a
10 strap (5) and two double cords (6), and a fastening means consisting of two complementary strips (7) and (8) of surface fastener (Velcro [RTM]), one (7) sewn onto a flap (9) which extends from the end of the mat portion distal to the storage device, and one (8) sewn onto the underside of the mat (*i.e.* the face of the mat which is to the outside when the device is rolled up), towards the end of the mat which is proximal to
15 the storage device (see Figure 2).

The mat portion (2) is made of fire-resistant polyurethane foam covered in washable PVC-coated cotton fabric on the inside [*i.e.* the face (10) that is upward during use], and in rip stop nylon on the outside [*i.e.* face (11) that is on the underside during use].
20 The under face (11) has stitched on rubber mouldings (12) to help prevent the mat slipping during use. The fastening flap (9) is made of rip stop nylon. A further rip stop nylon flap (13) sewn onto the other end of the mat portion (2) is attached to a sliding clasp fastener (zip) (14), which connects the mat portion (2) to the storage portion (3). The mat portion (2) further has two flaps (15), of the same length as the mat, each
25 consisting of a double thickness of rip stop nylon, sewn along each side of the mat. A narrow seam (16) is sewn along the outer edge of these flaps, and the cords (6) pass through this seam. The cords are secured at the ends of the flaps proximal to the storage portion, and emerge at the ends of the flaps distal to the storage portion, through a metal eyelet (17) (see Figure 4).

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The storage portion (3) consists of two pockets (18) and a flap (19) which can be folded over the pockets, as shown in Figure 3, thus preventing items falling out. The storage portion is attached to the mat portion by means of the sliding clasp fastener (11), sewn onto one side. The storage portion (3) is made from rip stop nylon, apart from part of the fronts of the pockets, which is made from nylon mesh, conveniently allowing the contents of the pockets to be seen.

A strap (5) is attached to the double cords (6), making the device more comfortable to carry on the shoulder than would be the case if the carrying means consisted of the cords alone.

As shown in Figure 4, once the device is rolled up, and the cords pulled tight (as will usually occur automatically under the weight of the device), the flaps (15) form a drawstring-type closure covering the ends of the roll.

Figure 5 shows an alternative embodiment of a device according to the invention, in which the storage portion is attached to the side, rather than to the end of the mat portion. In this particular embodiment, the flaps along the side of the mat portion are absent.

Figure 6 shows a further embodiment of the invention, in which a further pocket (20) is attached to the end of the mat distal to the storage portion. It will be seen that this provides a conveniently accessible pocket when the device is rolled up. The pocket (20) is fastened by a zip fastener (21).

CLAIMS:

1. A portable combined mat and storage device comprising:
a mat portion having two ends and two sides,
5 a storage portion, attached to one end or to one side of the mat portion, which
comprises a plurality of transversely arranged pockets,
a fastening means, and
a carrying means
adapted such that
10 the storage portion and the mat portion can be rolled up coaxially end-to-end, so that
the storage portion is inside the resulting roll, and the roll can then be fastened with the
fastening means, and carried by the carrying means.
- 15 2. A device according to Claim 1 wherein the mat portion is generally elongate.
3. A device according to Claim 1 or Claim 2 wherein the storage portion is
detachable.
- 20 4. A device according to Claim 3 wherein the mat portion is attached to the storage
portion by a sliding clasp fastener.
5. A device according to any of Claims 1 to 4 wherein the storage portion
additionally comprises a flap or flaps to cover and close off the pockets.
- 25 6. A device according to any of Claims 1 to 5 further comprising a slip-resisting
means on the face of the mat portion that is on the underside during use.
7. A device according to any of Claims 1 to 6 further comprising a further pocket,
attached to the mat portion, that is accessible when the device is rolled up.

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8. A device according to any of Claims 1 to 7 wherein the storage portion is attached to one end of the mat portion.

9. A device according to any of Claims 1 to 8 further comprising a flap along each side of the mat portion, and wherein the carrying means comprises a cord passing along the outer edge of each flap, the flaps and the cord together forming a drawstring closure covering the ends of the roll once the device is rolled up.

10. A device according to Claim 9 wherein the width of each flap is approximately equal to the radius of the roll when rolled up and normally loaded.

11. A device according to Claim 9 or Claim 10, wherein the length of each flap is approximately equal to the circumference of the roll when rolled up and normally loaded.

12. A device according to any of Claims 9 to 11, wherein each flap extends along substantially the whole length of the mat.

13. A device according to Claim 12, wherein, when the device is unrolled, the cord functions as a drawstring to maintain the flaps elevated from the plane of the mat portion, thereby creating sidewalls.

14. A device according to any of Claims 8 to 13 wherein the fastening means comprises two strips of complementary surface fastener material, one attached to a flap on the end of the mat portion distal to the storage portion, on the face which is towards the inside of the device when rolled up, and the other attached to the mat portion on the face which is towards the outside of the device when rolled up.

15. A device according to any of Claims 1 to 7 wherein the storage portion is attached to one side of the mat portion.



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Application No: GB 9909493.0
Claims searched: 1-15

Examiner: G WERRETT
Date of search: 28 July 1999

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed. Q): A4G, A4M, A4S.

Int Cl (Ed. 6): A45C, A45F.

Other: Online : WPI.

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2309160 A (CRAWFORD)	1.
X	GB 1407484 (MORRIS ADAMS)	1.
X	EP 0439420 A1 (POLYRON)	1.
X	WO 96/16567 A2 (ROBINSON)	1.

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category:	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.